

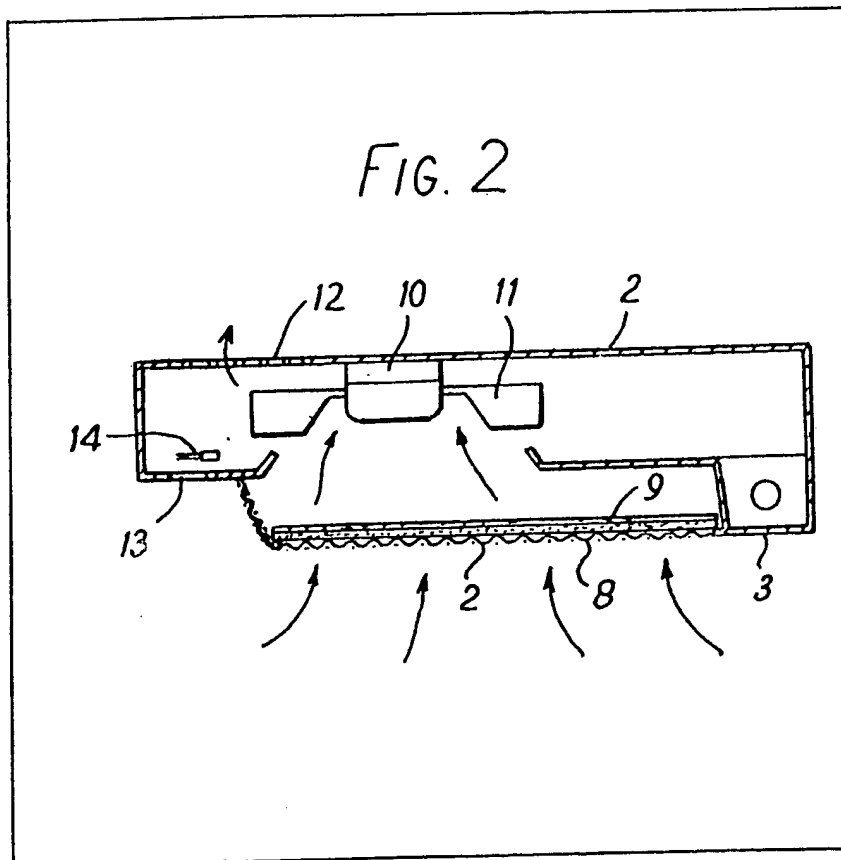
⁽¹²⁾ UK Patent Application ⁽¹⁹⁾ GB ⁽¹¹⁾ 2 002 106 A

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(54) COOKER HOODS

(57) A cooker hood incorporates an electric fan (10) and a temperature sensor (14), operation of the fan being

automatically controlled by the sensor in accordance with the temperature at the cooker hood. Manual over-ride may be provided to allow continuous operation of the fan if desired. The hood may be recirculatory.



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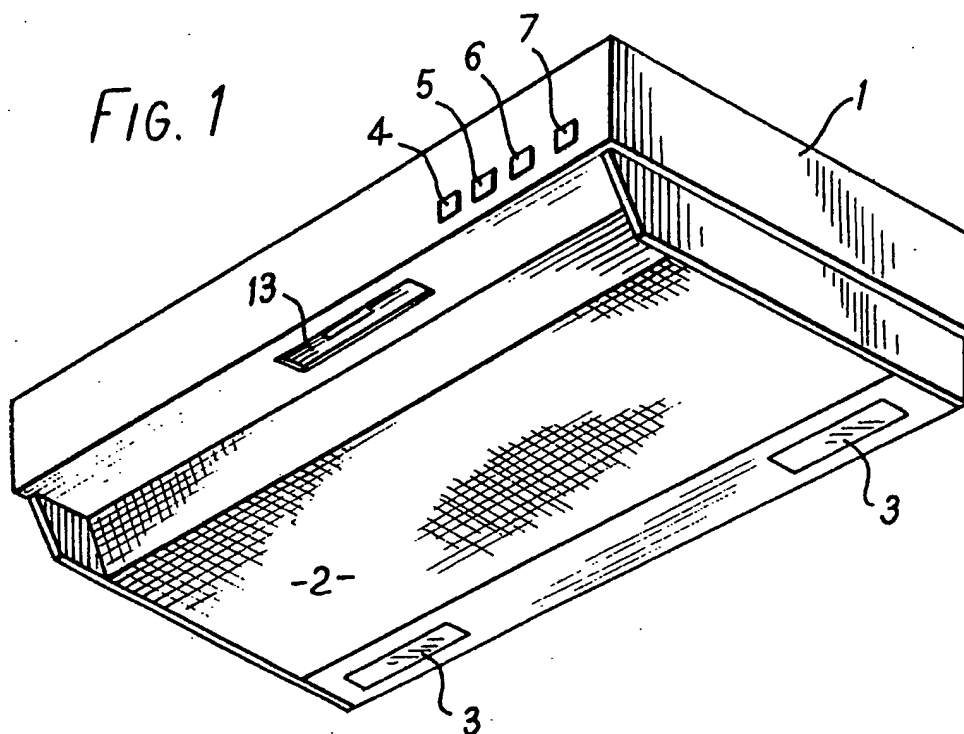
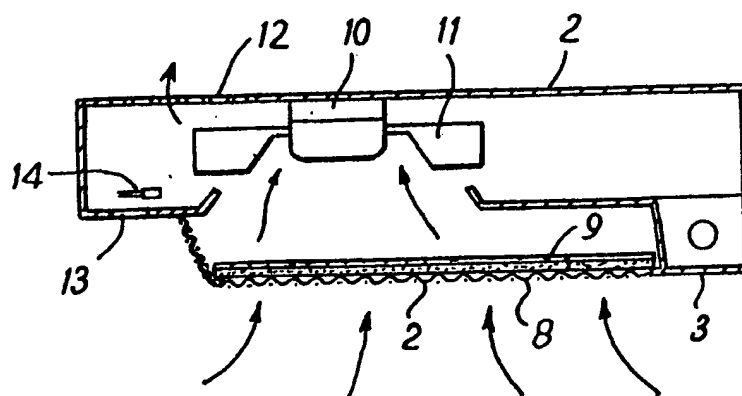
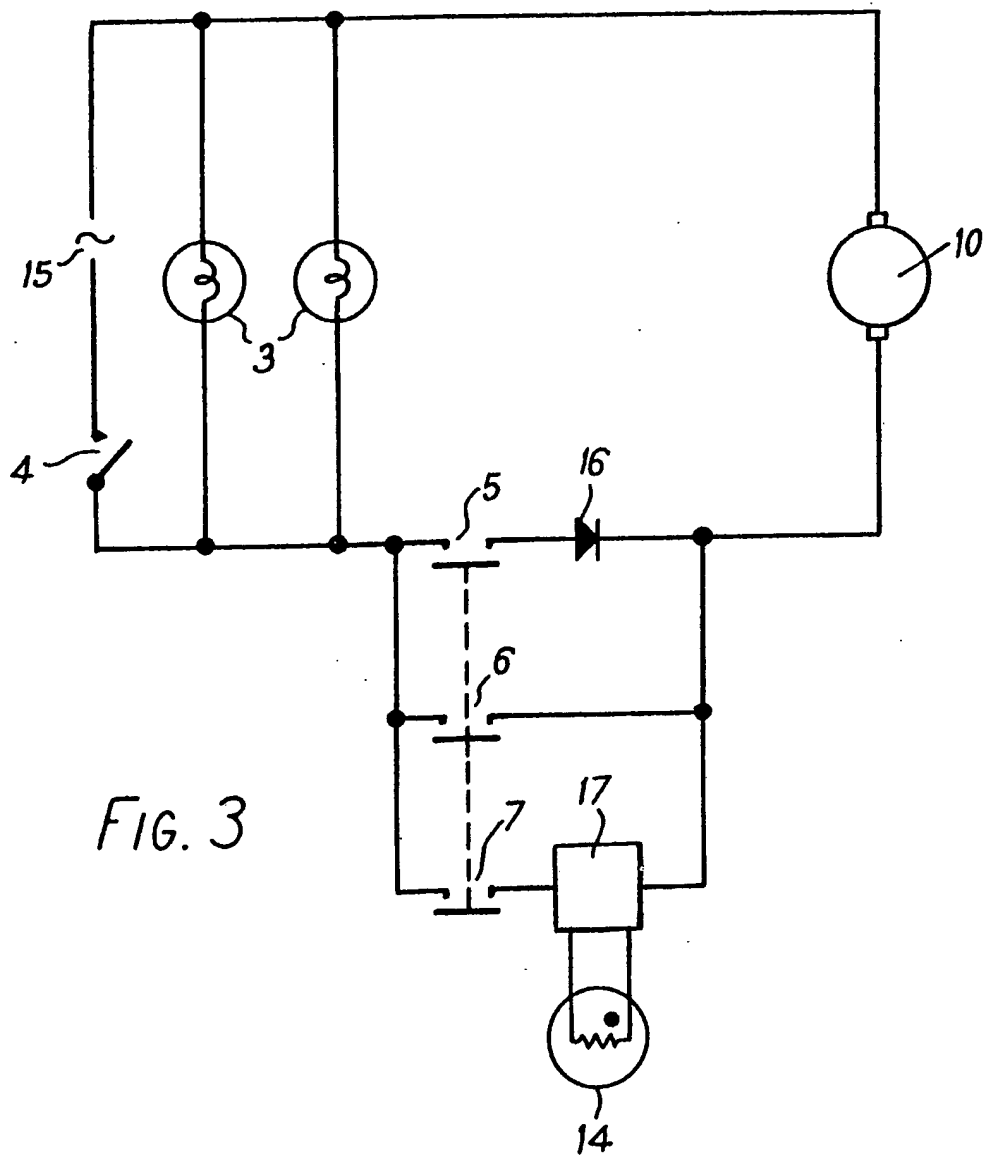


FIG. 2





SPECIFICATION

COOKER HOOD

The invention relates to a cooker hood.

According to the invention there is provided
5 cooker hood comprising a housing for mounting
above a cooker; an electric fan in the housing
mounted to draw in gases and vapour from the
cooker; a temperature sensor in the housing; and
10 circuit means which enable the temperature sensor
to control the fan in accordance with the
temperature at the housing.

Control of the fan speed may be continuous in
accordance with the temperature or in steps.
However, the preferred arrangement is the
15 simplest, where the fan is switched on when the
temperature rises above a predetermined level and
switches off again when the temperature falls
below a particular level.

With the arrangement in accordance with the
20 invention it is possible to provide an automatic
mode for the cooker hood whereby the fan
operates only when the temperature is sufficiently
high. In other words, the fan will only operate if
the temperature has risen enough as a
25 consequence of the cooker being used for a
significant time or to a significant extent.

In a preferred arrangement, the automatic mode
is optional and there are provided further control
buttons for allowing continuous operation of the
30 fan, perhaps at two alternative speeds.

The cooker hood may be of the kind which
exhausts air to the exterior. Alternatively, the
hood may be of the recirculatory kind which
incorporates a filter for grease and fumes and
35 recirculates the exhaust gases to the kitchen.

The invention will further be described with
reference to the accompanying drawings, of
which:—

Figure 1 is a perspective view of a cooker hood
40 in accordance with the invention;

Figure 2 is a sectional side elevation of the
cooker hood of Figure 1; and

Figure 3 is a circuit diagram of the motor
control arrangement for the cooker hood.

Referring to Figure 1, the cooker hood
45 comprises a housing 1 for mounting above a
cooker. The underside of the housing has a metal
grill 2, through which gases and vapours from the
cooker are drawn. Lights 3 to illuminate the
50 cooker are included. On the front of the cooker
hood is a set of push-button controls. Button 4 is
an on/off button and controls the lights 3. Button 5
switches on a fan in the cooker hood at slow speed.
Button 6 switches the fan on at full speed, and
55 button 7 allows the fan to operate in an automatic
mode to be described.

Referring to Figure 2 the hood is shown in side
elevation and within the grill 2 there is a grease
filter 8 surmounted by a charcoal filter 9 for
60 absorbing fumes and smells.

Gases from the cooker are drawn through the
filter by an electric fan which has a motor 10 and
fan blades 11. The filtered gases are recirculated

through vents 12.

65 At the front of the cooker hood there is an
aperture 13 above which is a thermistor 14. The
thermistor detects the temperature at the cooker
hood.

Referring now to Figure 3, there is shown the
70 circuit diagram of the control arrangement for the
cooker hood. The motor 10 is a commutator motor
which derives current from an alternating current
supply 15. Push-button 4 is an on/off switch which
also illuminates the lamps 3.

75 Push-buttons 5, 6 and 7 have a mechanical
interlocking action so that when a button is
depressed it stays locked until another button is
depressed. Push-button 5 connects the motor 10 to
the alternating current supply through a diode 16.
80 This effectively reduces the supply voltage and the
motor runs at about half speed. Depression of
button 6 by-passes the button 5 and the diode 16 so
that the full voltage of the supply is applied to the
motor 10. The motor therefore runs at full speed.

85 Depression of button 7 by-passes the push-
button 6 (which is thereby disengaged) with a
control circuit 17. The circuit 17 responds to the
output from the thermistor 14. Circuit 17 includes
a relay and when the temperature of thermistor 14
90 exceeds 40°C the relay is closed so that a direct
connection is made between the mains supply and
the motor 10. The motor therefore runs at full
speed. When the temperature of the thermistor 14
falls below 40°C the relay cuts out and the motor
95 10 is cut off. Under normal operating conditions,
the fan will therefore run if the temperature at the
cooker hood is 40°C or above. Otherwise, the fan
will automatically cut off.

The invention is not restricted to the details of
100 the embodiment described above with reference to
the drawings. For example, the temperature sensor
may be a bi-metallic switch instead of a thermistor,
the switch being arranged to close to energise the
fan motor when the predetermined temperature is
105 attained. The predetermined temperature is said in
the example to be 40°C. However, it will be
appreciated that this can be set to any desired
level.

CLAIMS

110 1. A cooker hood comprising a housing for
mounting above a cooker; an electric fan in the
housing mounted to draw in gases and vapour from
the cooker; a temperature sensor in the housing;
and circuit means which enable the temperature
115 sensor to control the fan in accordance with the
temperature at the housing.

2. A cooker hood as claimed in claim 1 wherein
the circuit means is such that the fan is switched on
when the temperature rises above a predetermined
120 level and is switched off again when the
temperature falls below a particular level.

3. A cooker hood as claimed in claim 2 wherein
the said predetermined level is substantially 40°C.

125 4. A cooker hood as claimed in claim 3 wherein
a manual control is provided for over-riding
automatic temperature-control of the fan and

allowing the fan to run continuously.

5 5. A cooker hood as claimed in claim 4 wherein the manual control is effective to select between half-speed and full-speed continuous running of the fan.

6. A cooker hood as claimed in claim 5 wherein half-speed operation of the fan is achieved by

switching a diode into circuit with the fan motor, the power supply being A.C.

10 7. A cooker hood as claimed in any of the preceding claims which is recirculatory.

8. A cooker hood substantially as hereinbefore described with reference to the accompanying drawings.

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